Multi-Media Programs Branch, US EPA Region II, to Mr. Robert Callageri, Army Corps of Engineers/Philadelphia District, June 30, 1999)

To the extent the Army Corps did do sampling of sediments in the private channels it did not include sampling at Motiva (a facility that was included in the 2002 economic benefits calculation of the project). And the sampling that was done found that sediments contained a variety of toxins and metals such as PCBs, DDE and pesticides including DDD, DDT and Endrin. In addition, while the Corps provides multiple explanations and dismissals of the findings, their SEIS did find that NJDEP residential soil clean up criteria were exceeded for cadmium, thallium, ideno (123-cd) pyrene, 2,4-dinitro toluene, and N-nitrosodi-n-propylamine. *(See Delaware River Main Channel Deepening Project, Supplemental Environmental Impact Statement, July 1997, pgs 4-52 thru 4-77).* The Army Corps dismisses these findings by saying they are at levels comparable to what was found in the main channel and that the sediments would be disposed of on land. In light of the questions and information provided in this Review document, including the questions raised by sister agencies, the Army Corps has clearly not settled the question of whether dredging the private channels, including upland disposal of contaminated sediments, will have an adverse environmental impact.

In 2003 the USF&WS also expressed concerns about other aspects of the deepening project on both Bald Eagle and Peregrine Falcon – essentially revoking its previous findings of no harm. "In a letter to the Philadelphia District dated January 18, 1996, the Service concluded that the Delaware River Main Channel Deepening was not likely to adversely affect the Bald Eagle or Peregrine Falcon *(Falco peregrinus*). … the Service has acquired new information on the contaminants in the Delaware River, suggesting that the previous not likely to adversely affect determination may no longer be appropriate." *(Letter from US Fish and Wildlife Service to the Army Corps of Engineers Philadelphia District, July 31, 2003.)* Similarly, New Jersey's Division of Fish & Wildlife has stated: "concern exists that the current levels of toxins in the fisheries resources of the river to both migratory and nonmigratory populations may increase due to the re-suspension of contaminated sediments during dredging operations and surface discharges from the upland CDFs." *(NJDEP Briefing, Delaware River Main Channel Deepening Project, Supplemental Environmental Impact Statement (SEIS) Information, January 2007).*

New Jersey has also asserted the need for an evaluation of the "relative risk of contaminants in the dredged material to human health, wildlife, and especially endangered species such as bald eagles and peregrine [sic] falcons." According to New Jersey, such an evaluation should include sediment data collated by NOAA, NJDEP and others after the Athos I Oil Spill of 2004. *(NJDEP Briefing, Delaware River Main Channel Deepening Project, Supplemental Environmental Impact Statement (SEIS) Information, January 2007).*

9. Information Regarding Biological Windows

Since the 1997 SEIS, the Army Corps has made clear its plans to ignore some of the biological windows significant to protecting species from the deepening project and associated activities. The ramifications of ignoring the biological windows will be significant. This change in the project – in that there is a stated position to ignore biological windows – is significant and must be subject to EIS review as well as be part of any Essential Fish Habitat and Endangered Species Act consultations and reviews.

For those biological windows that are not to be ignored, the Army Corps has failed to include them in their project plans and economic calculations for the project.

Current project plans fail to provide or economically account for biological windows necessary to protect critical species in the Delaware Estuary including, horseshoe crab, winter flounder and blue crab. While a number of environmental windows were identified in the 1997 Final SEIS, several key issues were deferred to subsequent planning, and other significant new issues have arisen since then. The Corps has admitted it must violate biological windows in order to proceed with the Deepening project. The full environmental ramifications of such violations and waivers are yet to be evaluated. *(Corps of Engineers Responses to Exhibits/Transcript Submitted in DNREC's Letter Dated December 21, 2001 To Corps of Engineers, at p. 277; additional detail on this issue can be found in Delaware River Deepening Project: Outstanding Environmental And Community Issues, Delaware Riverkeeper Network & National Wildlife Federation, August 9, 2002)*

The DNREC Hearing Officer also noted that the "…Corps has not demonstrated the harm resulting to winter flounder from the subject beach nourishment projects is either avoided or minimized by suspending the protective environmental window." *(State of Delaware, DNREC, Hearing Officer's Report, Recommendation to the Secretary, US Army Corps of Engineers Application for Permit Delaware River Main Channel Deepening Project, Timothy Bureau Hearing Officer, December 2003, p. 81).*

10. Information Regarding Oil Spill Ramifications

Prior to the 1997 SEIS, the ramifications of a deepened channel for oils spills including harm to aquatic, riparian and wetland ecosystems has not been properly assessed by the NEPA EIS process. A significant study addressing this issue was released in 2003 and found that in fact a deepened channel may increase the risk of hazardous spills on the River. This reported findings must be adopted and included in an updated EIS process.

With a deepened channel ships will come up the Delaware River more heavily laden, if there is another catastrophe like the Athos I of November 26, 2004 (a possibility not unchanged by a deepened channel) the volume of oil available to leak and wreak havoc on the environment and our communities will be greater and therefore more dangerous. The EIS needs to adopt and include this real world concern. A catastrophic spill of greater proportions due to a deepened channel increases dramatically the potential harm to the environment, communities, power plants, local and regional businesses and economies. This known effect on the project environment addressed in reports since the 1997 SEIS need to be subjected to NEPA review.

To date, the Army Corps has wrongly claimed that a deepened channel will reduce the risk of hazardous spills on the River. Yet, according to the sole study that has directly considered this issue, "According to the model, a marginally greater number of hazardous-commodity spills are projected for the deepened channel than for the channel at its current depth. These findings are for the years 1990-2010." (*Jack Faucett Associates for the Delaware Estuary Program, Projected Vessel Casualties and Hazardous Spills in the Delaware River and Delaware Bay With and Without Channel Deepening, 1990-2010, April 1993*)

Another source noted that: "In considering the environmental impact of a deeper main channel, the same number of crude oil tankers would have to be lightered at Big Stone Beach Anchorage, only the amount of crude oil transferred would be reduced. The most environmentally challenging aspect of lightering operations is the activities associated with bringing the barge along side and hooking up and later unhooking the cargo hoses. These activities would not be changed as a result of a deepening main channel." *(Report from "Charles Zeien Associates, Naval Architects, Shipping and ShipBuilding consultants, "Impact on the State of Delaware of a deeper Delaware River Main Channel, March 18, 1998. In 2008 an article in the Cape Gazette titled Delriver: on call 24/7 to protect Delaware's environment, confirmed that that oil tankers still come into Delaware Bay with a draft of 50 to 55 feet, thus still requiring lightering. Delriver: on call 24/7 to protect Delaware's environment, by Ron MacArthur, Cape Gazette, 10/10/2008.)*

11. Information on Availability of Alternatives

Since 1997, other alternatives have become available for the oil facilities, the primary project beneficiaries, which should be evaluated as part of an EIS process. In addition, there is new information about the safety and continuation of oil lightering that needs to be included in an updated alternatives review. Further, the record becomes increasingly clear that a deepened channel is not the preferred option for the oil facilities and that if it happens many are not likely to take advantage of a deepened channel.

Other alternatives have emerged for the oil facilities with regards to their shipments that should be included in an EIS alternatives analysis. In 2001, Sun Oil put into operation a shallow draft crude carrier. The vessel, a Stena Vision, carries "more crude oil than any other ship in the river's history" – the tanker design allows cargo intake to be increased by 20 to 40% compared to Very Large Crude Carriers and up to 70 to 100% more than Suezmax tankers. "This results in an extremely competitive transport economy to ports with draft restrictions, with potential savings of 15-30 cents per barrel." The vessel, which has a design draft of 16.76 m, floats higher in the water and allows more oil to be carried directly to the refinery thereby reducing or avoiding altogether the need for lightering. These shallow draft vessels have double hulls and therefore are also safer from an oil spill perspective. *("Stena Vision – The Biggest Kid on the Block", The Beacon, September/October 2001, p. 7 ; Stena V-Max, Investment in safety and flexibility" Classification News 2.2001, p. 5)* These vessels allow oil refineries to carry more oil up the River at lower cost with lessened and/or no lightering, just as a deepened channel could provide. This alternative, non-structural approach for cost savings to the oil refineries has not been addressed by the Corps in their EIS documentation.

According to the Corps' 1998 Limited Reevaluation Report more than 80% of the projects benefits are attributed to six oil facilities. In its 2002 Economic Reanalysis, 60% percent of the benefit from the proposed deepening project accrues to seven oil facilities. According to the 2004 Economic Reanalysis 50% of the benefit of the deepening project accrues to Delaware River oil facilities. In each case the oil facilities are the largest beneficiaries of this project. Thus, it is of vital import that the record grows increasingly strong that a deepened channel is not the preferred alternative for the oil facilities operating along the Delaware River.

For example, EPA Region II noted that "With regard to the project's B/C ratio, the original project scope included six petroleum facilities as project beneficiaries. However, we have

seen no documentation that any of these facilities plan to dredge their private channels. To the contrary the limited documentation we have indicates that one or more of the petroleum companies believe that it is not in their best economic interest to participate. …. Moreover, if these facilities are not committed to participate, we would argue that the scope of the project would be modified, which would require the Corps' to recalculate the B/C ratio." *(Letter from Robert H. Hargrove, Chief, Strategic Planning and Multi-Media Programs Branch, US EPA Region II, to Mr. Robert Callageri, Army Corps of Engineers/Philadelphia District, June 30, 1999.)*

Coastal Eagle Point Oil Co. continues to express concerns about the impacts of the deepening project on its operations. According to the 2002 Economic Reanalysis, Coastal is projected to receive 7.25 % of overall project benefits and 12% of the benefits attributable to the oil facilities – their concerns about benefiting from or utilizing the project are significant. In a September 2003 letter to the Army Corps the Coastal Eagle Point Refinery wrote:

- "Coastal is physically limited to process approximately 140,000 bbl/day of crude; while refinery processes and products may change slightly over time this will not increase with a deeper channel."
- "Coastal uses Suezmax … and Panamax tankers. … A deeper channel would not benefit the ship by allowing it to load more and claimed savings by the ACOE due to this are not realistic."
- "In summary, the potential for significant savings from crude lighterings exist, however, not to the extent stated by the ACOE and subject to any increase in rates or reduction in equipment which would significantly reduce or eliminate these savings."
- "While Coastal understands that a deeper channel would be beneficial to some users … Coastal is unable to support the stated savings and considers it possible that their transportation costs could increase under with-project conditions."
- "Coastal other main concern is with the docks and notes that … costs associated with berth modifications necessary to accommodate deeper vessels are unknown at this time and may be prohibitive."

(Letter from Andrew R. Mortensen, Loss Control Supervisor, Coastal Eagle Point Oil Company to Department of the Army, Philadelphia District, Corps of Engineers, September 3, 2003")

Motiva refinery, a Delaware-based facility, which has been ascribed a benefit in the 2002 economic reanalysis (nearly 3% of overall project benefit and nearly 5% of the oil facilities' benefit) has said that "the dredging project will increase shoaling at the refinery by a factor of 1.5 to 2.0 (Mantzanious, 2001)." As a result, their annual maintenance costs will be increased. *(Thomas A. Grigalunas, Ph.D. and James J. Opaluch, Ph.D., Proposed Delaware River Channel Deepening Project: Review and Critique of Economic Analysis, prepared for DNREC, April 2002)* As a result, Motiva has indicated they are not supportive of the project.

A local newspaper reported that:

> Three oil refineries along the river won't commit to dredging their ships' berths to match the deepening of the channel to 45 feet. The largest refinery is interested but would have to blast through a granite shelf at a cost exceeding its benefits to reach the new

> channel depth. …. The Westville-based Coastal refinery has 'no plans to deepen' the spur channel to its dock, said Greg Clock, a company spokesman. Richard H. Chlan, chief of public affairs for the Corps, has said depth at Coastal's docks is already 45 feet, therefore 'Coastal doesn't need to dredge.' Clock says Coastal's dockside depth is 40 feet. … Patrick Prosser, a spokesman for Tosco refinery in Marcus Hook, PA, said 'At this point in time, (Tosco) is not committing any resources to improve the dock in order to support ships of greater tonnage.' He added that Tosco hasn't made a decision whether to dredge its berth. Claire Riggs, a spokesperson for Valero's Paulsboro refinery, said, 'Our position is if this project goes through, we'll definitely consider dredging our docks. We don't have any capital funding allocated to it, because it's not something out there for us to consider (now).

("Critics Claim no benefit to dredging", Gloucester County Times, September 17, 2000.)

Another source summarized:

> [T]he Courier surveyed the four companies that operate five Philadelphia area refineries to gauge their interest in the project. Only Valero Refining Co. in Greenwich – the region's smallest refinery – says it is considering deepening its own berths to take advantage of a deeper channel. The others – Sun, the largest refiner on the river with plants in Marcus Hook, PA and Philadelphia; Coastal in West Deptford; and TOSCO in Trainer, PA – all say they have no plans to deepen berths in the vicinity of their docks. …. Coastal is worried deepening its berths could undermine the integrity of its docks. ' 'We have no plans to deepen,' said Costal Spokesman Greg Clock … Sun, which refines more than 40% of the crude shipped up the river, said it would have to do a detailed economic analysis to determine if the project would benefit the company, spokesman Gerald Davis said … TOSCO said the deepening should benefit the port in general, but the company has concerns about undermining its docks. 'We would need to do studies' … spokesman Pat Prosser said."

("Questions haunt economics of $311 million river project." Courier Post, April 16, 2000.)

Considering the high level of benefit ascribed to these companies and their public statements that they do not support the project and/or will not benefit from the project and/or that they have concerns about how the project may negatively affect their operations are significant. According to the 2002 economic reanalysis Coastal is projected to receive 7.25% of overall project benefits and 12% of the benefits attributable to the oil facilities and Tosco is projected to receive just over 5% of overall project benefits and nearly 9% (8.81%) of benefits attributable to oil facilities, Sun is projected to receive over 25% (25.24) of overall project benefits and 42% of the benefits attributable to the oil facilities.

These documents are in addition to the *pre-1997* documentation that had already demonstrated that a deepened channel was not the preferred option forward for the oil companies. For example:

- "The position of Sun is that due to overall concern for the economics of deepening the Delaware River to 45', the company won't support the project…. An internal Sun report estimates that Marcus Hook and Ft. Mifflin facilities would save only $2-$2.5M per year in crude oil lightering costs. This figure does not reflect the impact of additional berth

area costs. This low figure presents no economic advantage to Sun. … Based on actual experience when the Delaware River was dredged to 40', Sun has a significant concern over the costs to deepen their berthing/access area to 45'. A ledge of intrusive rock (granite) outcrops over one half of their berthing area. …. In addition they have breasting cells that sit as a gravity structure on rock at 40'. Deepening would cause these structures to become unstable and necessitate replacement. This impact would raise berthing area costs…." *(Memorandum for the Files. By John E. Tunnell, P.E., CENAP-PL-P (1105-2-10a), April 16, 1991.)*

- "Sun Pipe Line Company has indicated that they see no advantage to a 45 foot deepening at their facility at this time and the tanker berths will remain "as is"" *(ST Hudson Engineers, Correspondence to Army Corps of Engineers, August 3, 1994.)*
- "Sun Pipe Line Company sees to advantage to a 45 foot berth at their Fort Mifflin Terminal at this time." *(ST Hudson Engineering, Meeting Minutes dated July 1, 1994)*
- Regarding Mobil Oil Corporation, Paulsboro Refinery, Paulsboro, NJ - "Mobil Oil Corporation has indicated that they see no advantage to a 45 foot deepening at their facility at this time and the tanker berth will remain "as is." *(ST Hudson Engineers, Correspondence to Army Corps of Engineers, August 17, 1994.)*
- Regarding Mobil Oil Corporation - "At this time, the tanker berth will remain "as is". … Mobil sees no advantage to a 45 foot berth at their facility at this time." *(ST Hudson Engineers, Minutes of Meeting, May 23, 1994)*

The reality that a deepened channel is not a preferred option for Delaware River operators is supported by recent investments from the Delaware River lightering company. On September 6, 2005 Maritrans, now OSG, announced that it had signed a contract "to build three new articulated tug-barge units, each having a carrying capacity of 335,000 barrels" in order to replace the existing 3 vessel fleet the company current uses for Delaware Bay/River lightering operations. OSG's/Maritrans' current, without project (as the Corps calls it), fleet has a capacity of 910,000 barrels. Its new fleet will have a capacity of 1,005,000 barrels. OSG/Maritrans is clearly expanding its fleet carrying capacity in order to accommodate a future without project scenario and sees this as the best investment for their company.

V. Comments Regarding Required Permitting and Approvals for Project

The record should reflect that the Army Corps does not have all of the state approvals necessary for the project to move forward. The Delaware Coastal Zone Consistency Determination was conditional on the Army Corp addressing a large variety of issues. Not all conditions have been met.

The project is in need of a valid New Jersey Federal Coastal Zone Consistency Determination. The New Jersey Consistency determination issued in 1997 for the Project was revoked by letter dated September 30, 2002, from former NJDEP Commissioner Bradley Campbell. This determination of revocation was based upon a 5-year lapse of time since issuance of the Determination (now more than a decade), the significant amount of new economic and environmental information that had been received on the project, and changes to the Project. Since revocation, the project has continued to evolve and new information continues to emerge. Governor Jon Corzine of New Jersey reiterated his position in 2008 that the Army

Corps must comply with all applicable state regulations. (*Correspondence from Governor Jon Corzine to John Paul Woodley, Jr., Assistant Secretary for Civil Works, Army Corps of Engineers, dated June 27, 2008)*

Pursuant to Clean Water Act Section 401, New Jersey issued a Certification for the Delaware River Main Channel Deepening Project to the Army Corps of Engineers. According to the State, the Certification expired on its own terms in 2002. While the Army Corps has taken a position that the Delaware River Main Channel Deepening Project does not require a Section 401 water quality certification from New Jersey, there appears to be ample precedent to support the need for a renewed certification, including the Corps having previously subjected itself to this process.

VI. Comments Regarding the Materials/Studies Referenced in the Corps' December 17, 2008 Notice

The document titled Delaware River Main Channel Deepening Project Summary of Supplemental Information Compiled by the Corps of Engineers (1998-2007) (Summary Document) that accompanied the public notice the Army Corps explicitly states that the intent of its new research and data gathering efforts was not to assess and evaluate potential harms for the purposes of making an informed decision regarding the potential impacts and values of a deepened channel, but rather that "the information will be used as the project moves forward to insure that all practicable means to avoid or minimize adverse environmental effects have been incorporated into the recommended plan and to identify any unanticipated impacts during the construction process." The goal statement of a research, scoping or information-gathering project is critical and guides how and what information is collected. Information-gathering for purposes of objective assessment is very different than information-gathering for purposes of moving a project forward. Clearly, the studies undertaken by the Army Corps are unlikely to yield the type, breadth and quality of objective information necessary to inform an EIS process or objective decision-making required by NEPA.

A summary of the data collection and/or studies conducted by the Army Corps since the 1997 SEIS is provided in the Summary Document. The list includes:

1. **Studies of the Delaware Bay Oyster beds in the vicinity of the proposed restoration projects**
2. **Collection of sufficient pre-construction monitoring data in the vicinity of the Kelly Island restoration project to verify and evaluate ecological effects and benefits**
3. **Species specific studies for blue crab, horseshoe crab, *Sabellaria vulgaris*, shorebirds and sturgeon to address habitat utilization and verify previous findings**
4. **Water quality modeling efforts to obtain additional information "to confirm that the project would not adversely impact water quality with regard to dredging and placement"**
5. **Collection of sediment data and water quality monitoring of maintenance dredging "to provide further validation of previous findings."**

Even the most cursory review of these studies demonstrates that the Army Corps has failed to fully address the wealth of changed conditions, questions and concerns that have been raised by experts and agencies from throughout the region with regards to the deepening proposal.

1. General Criticisms

Oyster studies were undertaken not to identify potential threats to oysters for purposes of determining whether undertaking the deepening proposal was a wise decision, but were undertaken to collect data to merely assess what was happening to the oysters as the deepening progressed. The goal was not informed decision-making, but rather after-the-fact mitigation. The same can be said for the Kelly Island studies.

Concerns/deficiencies regarding the species specific studies and water quality studies have been articulated throughout this comment document.

The language used to describe items 4 ("Water quality modeling efforts to obtain additional information "to confirm that the project would not adversely impact water quality with regard to dredging and placement") and 5 ("Collection of sediment data and water quality monitoring of maintenance dredging "to provide further validation of previous findings.") supports the notion that much of the work conducted by the Army Corps with regard to the Project has been carefully designed to achieve a pre-determined outcome, rather than obtaining objective information for an objective decision-making process. (See USF&WS letter, *supra,* recommending modification of certain Corps language because, "As written, the statement appears pre-determining.")

The myriad deficiencies in the Corps' listed studies include, but are not limited to the following: Most of the studies are already dated; they have not been subject to public, agency or expert review and input; they fail to address directly the questions and concerns raised by the variety of agencies and experts cited previously in this comment; and they fail to answer the critical questions that need to be answered for informed decision-making under NEPA and other applicable legislative and regulatory programs. Additional deficiencies in each of the studies are exemplified below – this is not a complete identification of questions, problems and concerns, but merely a demonstration of the wealth and variety of deficiencies yielded by the shortened review necessitated by the improperly shortened comment period.

2. Preconstruction Oyster Studies to assess condition of oyster populations prior to Project construction.

The Pre-Construction Oyster Study, according to the Summary Document, was not to identify potential harms to oysters from the deepening, but merely to assess the condition of the oyster populations prior to construction of the deepening. Thus, this study is unlikely to provide the kind of information needed for EIS review or decisionmaking.

The Pre-construction Oyster Study is dated. The Pre-Construction Oyster Study needs peer review. For examples, the assumptions used for sea level rise are significant. As this study was undertaken in 2000-2001 it is unlikely that it included the 2005 and 2008 sea level rise studies and reviews that have been released. And yet, these more recent figures are based on a new and more substantive body of science with regards to potential sea level rise and therefore are likely to be more informed and accurate figures for such a review. In addition,

the study could not possibly have included or anticipated the new Flexible Flow Management Plan in place for the New York City reservoirs as that effort was initiated only in recent years. And yet, the freshwater flows from the NYC reservoirs are important in the location and assessment of the Estuary salt line, including its proximity to, and affect upon, the oyster populations of the Bay.

3. ***Species-specific studies for blue crab, horseshoe crab, Sabellaria vulgaris, shorebirds and sturgeon to address habitat utilization and verify previous findings***

The Delaware Bay Winter Crab Surveys were conducted with data collected in the winter months of 2001 and 2002. Like so much of the information the Army Corps is referencing in this most recent public notice, the data is relatively dated. In addition it is study and analysis that has not been subject to full agency, expert and/or public review and comment. While there was some review and discussion, we understand, with DNREC, there was not a release to the full array of regulatory agencies and experts in the region, and to the public, for their review and input as part of a comprehensive NEPA process. This information needs to be subjected to the NEPA process. Simply providing the Army Corps' summary of this and the other studies referenced in the notice is not defensible nor does it lend itself to full and informed agency, expert and/or public review and comment.

The findings of the Winter Crab surveys did demonstrate the presence of crabs in the main navigation channel. It talked about abundance of crabs being higher in areas that had not been the subject of maintenance dredging. There are areas of the channel that are naturally deeper and so do not undergo dredging or as frequent dredging. Going from 40 to 45 feet will increase the surface area of navigation channel that will need to be dredged repeatedly and therefore will increase the number of crabs impacted; while the 2002 study focused more on these spatial differences the data in fact seemed to suggest that there would be a greater take as a result. And there does not appear to be a focus on the impacts of the loss of crabs to population, reproduction, species diversity and survivability – the greatest focus is on the distribution of the crabs, where they are located on the bay bottom as opposed to what would the ramifications be to the population by the increased volume of crabs the deepening is likely to take on a repeat and regular basis. While to the Army Corps a take of 22% of the crabs may not sound high; to the crab population this volume of take could have significant ramifications. Study needs to consider the population impacts in order to be truly helpful in understanding impacts and to support informed decision-making. In addition, the study was based on a limited data set, two years of data, with no discussion as to annual conditions which may have affected the location of the crabs during the limited period of the study – more frequent sampling and annual studies would be required to determine if the data obtained is representational of normal conditions.

The goal of the Kelly Island study in 2001 was not to further assess environmental ramifications of the proposed deepening, but was merely to "provide a baseline ecological characterization of Kelly Island habitats prior to construction activities…." Again, this was not a study released and subjected to a full and informed review process, but was simply an Army Corps effort to collect data for assessing its deepening project after the fact.

Concerns articulated by DNREC's Hearing Officer in 2003 that the Kelly Island project "as proposed will result in unavoidable direct adverse impact to site horseshoe crab populations during construction and unavoidable potential secondary impacts to nearby oyster beds" is not addressed by the Kelly Island study of 2001 or by subsequent study. In fact, a 2005 Army Corps commissioned study (as discussed above) provides further support for the threats posed by the Kelly Island project.

The 2001 Preconstruction Shorebird Monitoring Study is, at this point, quite dated. There has been a tremendous volume of research that has been done on the horseshoe crabs and migrating shorebirds in the Delaware Estuary and Bay, this study reflects none of that research. Since 2001, as noted previously in this comment, there continues to be tremendous changes in the horseshoe crab and shorebird populations of the Delaware Bayshore – in both number and location. Those changes have been recorded and studied by numerous experts. None of that study is reflected in the Shorebird Monitoring Study or the other Army Corps materials that are part of the December 17, 2008 public notice. Nor does the Shorebird Monitoring Study address the full array of concerns articulated by the DNREC hearing officer or the US Fish & Wildlife Service on these matters.

The 2001 Pre-Construction Horseshoe Crab Egg Density Monitoring Study is also, at this point, dated. Since 2001, as noted previously in this comment, there has continued to be tremendous changes in the horseshoe crab and shorebird populations of the Delaware Bayshore. Those changes have been recorded and studied by numerous experts. None of that study is reflected in the Horseshoe Crab Egg Density Study or the other Army Corps materials that are part of the December 17, 2008 public notice. Nor does the Horseshoe Crab Egg Density Study address the full array of concerns articulated by the DNREC hearing officer or the US Fish & Wildlife Service on these matters.

The 2004 Horseshoe Crab Monitoring Study is dated. Events on the ground with regards to horseshoe crabs and dependent shorebirds are changing swiftly. Experts are monitoring and counting both the crabs and the birds annually, carefully tracking their behaviors and numbers. A 2004 study is not up to date and does not present the most current information and analysis available and necessary for making informed decisions on species that are already highly impacted and at high risk from additional harms.

The goal of the 2004 Horseshoe Crab Monitoring study, as with previous studies, was to gather "baseline information of horseshoe crab use of the islands prior to reconstruction and to provide a means to compare post-construction conditions to gauge the effectiveness of the beneficial use of sediments." The Study was not an analysis of the population harms (to horseshoe crabs and/or dependent migrating shorebirds) of the proposed spoil disposal activities proposed. As such the Study does not address the array of concerns presented by other agencies and experts. Very obviously, the study fails to include the ramifications of proposed efforts on Broadkill Beach, part of the Army Corps' new project dredge spoil disposal plan. (As stated in the Army Corps Summary document "The principal objective of this study was to evaluate horseshoe crab spawning on Egg Island, New Jersey and Kelly island Delaware.) While this unreviewed project suggests that "impacts to horseshoe crabs will be unavoidable for at least one spawning season" it fails to analyze the ramifications of such a loss of eggs to shorebirds which are already on the brink of extinction as the result of their inability to find enough eggs to fuel their annual migration. It also fails to directly state that to

undertake this effort as proposed requires violating biological windows that would be put in place for the deepening.

The 2001 and 2004 *Sabellaria vulgaris* monitoring studies confirmed the presence of *Saballaria vulgaris* at proposed spoil disposal locations and confirmed that the *Sabellaria* populations would be buried and thereby killed as a result of the project as proposed. These studies confirmed that as a result there would be a "substantial loss of this habitat." The 2004 study then proposes 3 mitigation options, but no supporting data or research are cited in support of the untested mitigation actions. In addition, the cost of these plans has not been included in the cost of the deepening project. And it does not appear that those agencies who should be involved in reviewing this project ever were – for example the National Marine Fisheries Service that is responsible for consultation regarding Essential Fish Habitats.

The Winter 2005 Adult and Juvenile Sturgeon Survey did confirm the presence of sturgeon in the region of the River where blasting is to occur, during the time of year when the blasting would happen. The Army Corps Summary takes great pains to minimize these findings by asserting that "large aggregations of sturgeon do not exist in the blasting area" although it does acknowledge that "impacts to even a small number of Shortnose or Atlantic sturgeon may not be acceptable to fisheries agencies." The summary of the study in the Summary Document concludes that measures would be required to move fish away from the blast zone. What this summary fails to tell you is that the report also stated "At present, there is no 'out-of-the box' behavioral deterrent system for excluding sturgeon from an underwater blasting area." The Sturgeon study fails to discuss the very low numbers of Atlantic Sturgeon surviving in the River – as few as 100 across the Estuary according to the 2008 Basin Report – and the potentially devastating ramifications of killing even a small number of sturgeon. Further, this study was based on <u>one</u> winter's data – this is not a large data set upon which to be making decisions regarding activities that could have such large and irreparable impacts to both the Shortnose and Atlantic Sturgeon species in the Delaware River. And the Delaware, New Jersey and federal resource agencies that have questioned the level of threat and harm the deepening could pose for sturgeon in the Delaware River were not a part of this commissioned study.

4. **Water quality modeling and sediment data collection to obtain additional information "to confirm that the project would not adversely impact water quality with regard to dredging and placement" and "to provide further validation of previous findings."**

The Near-Field Water Quality Modeling of Dredging Operations study does not lay to rest the concerns about reintroduction of PCBs and metals during dredging operations. Clearly the study has not addressed the outstanding concerns raised by the resource agencies regarding the reintroduction of metals and PCBs during dredging. In 2003 the DNREC Hearing Officer stated "A valid concern remains based on the fact expert judgment and not empirical data was used to create the standard of 250 mg/l of Total Suspended Solids (TSS) a distance of 200 feet from the point of excavation…. A valid concern remains because it is unknown whether the proposed TSS standard can actually be met…" In 2007 the NJDEP in a memorandum (as noted previously) also continued to question this potential pollution input.

The PCB Mobilization During Dredging Operations and Sequestration by Upland Confined Disposal Facilities study is another effort that has not been subject to the review and vetting of

other resource and regulatory agencies and their experts. The study assumes a 99.9% efficiency rate in terms of keeping PCBs on site at CDFs based on Army Corps review of three operating CDFs, but it fails to discuss or consider operating CDFs such as Fort Mifflin and Money Island that have been found to be a significant source of metals and toxins. The rate of sequestration is based on site specific conditions of a CDF and therefore it is inappropriate to apply a uniform figure to all CDF locations. Separate sampling should have been conducted for each CDF that is proposed for use and then these site specific figures applied. In light of the questions and concerns raised by the resource agencies (as discussed above) this site specific and therefore accurate data is necessary for informed review. In addition, this study does not address the questions and concerns that have been raised by other experts who have conducted similar sampling (as discussed previously in this comment) – the Corps merely dismisses those other studies and findings. In addition, the study fails to consider the existing PCB total maximum daily load requirement in place for the Delaware River, as well as the phase II total maximum daily load requirement that is under construction. The Delaware River is already impaired as the result of PCBs and has many species of fish which are the subject of fish advisories as the result of PCB contamination – the Army Corps needs to consider, and the resource agencies need to review, the potential contribution of PCBs from the deepening and confined disposal facilities on this existing condition.

The Reedy Point South Water Quality Modeling has also not been subject to the public review process, including review by the numerous state and federal resource agencies which should be involved. As in so many other instances, this study which did find that at least "four contaminants, copper, lead, mercury, and nickel, may exceed water quality criteria near the point of dredging and at the weir discharge", was largely dismissed by the Army Corps with assertions that the model over-predicted the level of contaminants that will enter the water column and that TSS concentrations will be lower than the 250 mg/l assumed. But the asserted conservativeness (over-estimation) of using a TSS concentration of 250 mg/l was already challenged by the DNREC hearing officer in the context of other Army Corps studies when it said: "A valid concern remains based on the fact expert judgment and not empirical data was used to create the standard of 250 mg/l of Total Suspended Solids (TSS) a distance of 200 feet from the point of excavation…. A valid concern remains because it is unknown whether the proposed TSS standard can actually be met…" In other words, the Army Corps stated in its study findings that 250 mg/l TSS was too high a figure and that in their assessment TSS concentration should be even lower; and yet the hearing officer is on record question whether in fact 250 mg/l is already too low a figure. The kind of routine dismissal of detrimental findings is all too common when it comes to the Army Corps and the deepening project. Clearly independent review and comment of this and other Army Corps studies and conclusions are required by other experts and agencies.

VII. Conclusion

The public notice that has been put forth by the Army Corps fails, on its face, to fulfill any legislative or regulatory requirement. Moreover, it improperly attempts to place the burden of identifying relevant significant changes on the public. The Army Corps has also failed to provide for a comment period that will result in informed and meaningful review and comment by agencies, experts and members of the public.

The public record clearly demonstrates that the Army Corps is in need of an updated EIS for the deepening project before it can move forward. In addition, the Army Corps needs to engage in and complete Endangered Species Act consultation for the project, needs to engage in and complete Essential Fish Habitat consultation for the project, and needs to engage in and complete a number of permitting and approval processes at the state level. And the Army Corps should wait until completion of the Government Accountability Office review of the project that has been granted and is soon to begin.

What seems most clear is that the Army Corps, along with the Philadelphia Regional Port Authority, the project sponsor, and Governor Ed Rendell and Senator Arlen Specter, the Project's primary supporters, seek to press this project forward in an attempt to "groom" it for federal funding under anticipated initiatives focusing on funding infrastructure projects. But this project has not fulfilled the legal requirements at the State or Federal level necessary to even consider movement towards construction. And neither the decisionmakers nor the public have full information on the project that is to be implemented, and/or the its environmental, engineering, economic and community ramifications and/or more recently available and less invasive alternatives that is needed for informed decisionmaking.

Before this project can be considered for further federal and local funding, significant work must be done to fulfill the Project's legal and regulatory obligations.

For your further consideration, I enclose and incorporate by reference two reports on the Project. Each was submitted to the Army Corps of Engineers when released:

- Strike Three: The Corps Fails Again to Justify the Delaware River Deepening", A report done by Dr. Robert Stearns for the Delaware Riverkeeper Network and National Wildlife Federation, July 14, 2003
- *Delaware River Deepening, Dumped Again, Delaware Riverkeeper Network & National Wildlife Federation, March 2007*

Respectfully submitted,

Maya K. van Rossum
the Delaware Riverkeeper

Enclosures

DELAWARE RIVERKEEPER®

September 13, 2009

Environmental Resources Branch
Philadelphia District, US Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107

& via email to: Public Affairs Office at Edward.c.voigt@usace.army.mil

Re: Clean Air Act Draft Conditional Statement of Conformity, Delaware River Main Channel Deepening Project, August 14, 2009

Dear Mr. Voigt,

Please accept these comments in response to the Army Corps of Engineers' ("the Corps") "Draft Conditional Statement of Conformity, Delaware River Main Channel Deepening Project" ("MCD" or "the Project"), and Revised "General Conformity Analysis & Mitigation Report," (collectively "Compliance Documents") purportedly in satisfaction of Clean Air Act ("CAA" or "the Act") Section 176(c) requirements.

Based upon the information provided, the Corps does not appear to be in compliance with Section 176(c) of the CAA and its implementing regulations, and cannot legally proceed with the MCD based upon this Draft or any subsequent Final Conditional Statement of Conformity.

The Compliance Documents Represent an Improper Process

The procedural violations represented in the Corps' Compliance Documents are significant. The Act's implementing regulations are clear that, "no department, agency or instrumentality of the Federal Government shall engage in, support in

Delaware Riverkeeper Network
300 Pond Street, Second Floor
Bristol, PA 19007
tel: (215) 369-1188
fax: (215) 369-1181
drkn@delawareriverkeeper.org
www.delawareriverkeeper.org

any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan" and that, "A Federal agency must make a determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of this subpart, before action is taken."

40 C.F.R. § 93.150(a),(b). Nowhere do the applicable CAA regulations provide for a "conditional proposal" to serve as a Clean Air Act Conformity Determination, as is apparently being proposed by the Corps. Nor do applicable regulations provide for the use of an "ongoing conformity determination" to fulfill the requirements of the law. The Army Corps' assertion -- that it will secure emission reduction credits for the first year of project implementation and then provide supplemental conformity determinations for all future years of the project -- does not comply with the letter, spirit or requirements of the Act.

The applicable regulations are clear that in projects like the MCD, where emission levels of criteria pollutants exceed the *de minimis* threshold, actions taken to mitigate those emissions, "must be identified before the determination of conformity is made," in order to achieve a finding of conformity, and the mitigation measures selected must be enforceable. 40 C.F.R. § 93.158. Providing a veritable take-out menu of possible options to be worked out on an *ad hoc* basis in the future, as the Army Corps proposes in their draft analysis, violates the Clean Air Act.

Yet another procedural violation is striking in its bold disregard of the law: The Corps ignores CAA regulations stating, "the conformity status of a Federal action automatically lapses 5 years from the date a final conformity determination is reported under [40 C.F.R.] § 93.155, unless the Federal action has been completed or a continuous program has been commenced to implement that Federal action within a reasonable time." 40 C.F.R. § 93.157. Repackaging information identified in the 2004 General Conformity Analysis and Mitigation report does not fulfill this requirement of the law. The Corps' attempt to merely "update" conformity documents outside of this 5-year window is a clear violation of law and should be prohibited.

Missing, Insufficient Data and Analysis in the Compliance Documents

The Compliance Documents reflect an absence of significant data and analyses. 40 CFR § 93.159(d)(1) requires that the analyses undertaken in the conformity determination must be based on total direct and indirect emissions from the action and must reflect emission scenarios that would include emissions projected in the project maintenance plan. In contrast:

✓The Conformity determination only includes the construction phase of the deepening project and associated private channel deepening, it fails to discuss or

plan for, to any degree, increased emissions that will result from maintaining an increased depth of 5 feet.

✓The most recently discussed Army Corps spoil disposal plan includes the use of existing confined disposal facilities to a much greater degree than originally proposed which will necessarily require the berms at those sites to be raised, significantly. According to an April 11, 2008 Army Corps document, in order to accommodate all spoil disposal in existing Army Corps CDFs the dikes on most of the federally owned facilities would need to be raised higher than was originally anticipated or planned for, anywhere from 10 to 44 feet higher than originally anticipated. The air quality impacts of this additional construction directly associated with the project is foreseeable and should be included in the conformity analysis and planning.

✓There has been much public discussion by the Army Corps and others, including a commitment by the Army Corps to work with a multi-state team resulting from the agreement reached between the governors of New Jersey and Pennsylvania, to transport and use deepening spoils in other locations for other purposes. These have included, by way of one example, the transporting and dumping spoils in the mines of Pennsylvania. The air conformity analysis should include the air quality ramifications of these apparently serious and foreseeable options for deepening spoils disposal.

Under the Act, 40 C.F.R. § 93.160 specifically mandates that measures intended to mitigate air quality impacts of the project "must be identified and the process for implementation and enforcement of such measures must be described, including an implementation schedule containing explicit timelines for implementation." The take-out menu of options the Army Corps has put forth for possible use in the future to mitigate identified air quality impacts does not fulfill the requirement for an implementation schedule, explicit timelines, and a process for enforcement of those measures.

Section 93.159 requires the use of the most up to date information and that analyses required by the regulations be "based on the latest and most accurate emission estimation techniques available". It is questionable whether this draft conformity determination, which is founded upon merely an "update to the 2004 General Conformity Analysis and Mitigation report," can be deemed to fulfill these legal requirements. While in some instances the Army Corps discusses the use of updated information in others it specifically references the use of old information despite the availability of new.

✓For example, under section 7.2 in the draft document the Army Corps states "These emission factors are reasonably consistent with the new emission factors used for the locomotive style engines assumed in the channel dredging estimates,

therefore they were left unchanged." If there are new factors and they are known, available and/or calculable then that most up to date information should be used.

✓By way of additional example, construction costs continue to be based upon figures provided as part of the 2004 report – this information is highly dated and can no longer be deemed up to date or accurate.

In addition, we highlight other instances where the Army Corps is clearly using inaccurate or barely substantiated information in its analysis.

✓In the Executive Summary the draft document talks about using "M&N's understanding of typical engine types in the existing industry fleet." This does not seem to meet the threshold of accuracy or specificity mandated by the law – the level of M&N's knowledge is unknown, undocumented and unsubstantiated so this could be a very low threshold of knowledge, information and accuracy and has no place in a document of this importance.

✓Elsewhere in the draft document there are references to information obtained via email with no indication of independent verification; again, this low threshold of substantiation for information should not be deemed acceptable.

✓The use of Panamax sized ships in calculating how many days would be required to achieve needed offsets in the "cold ironing analysis" is inappropriate in light of the known reality that "this is bigger than the typical size vessel currently calling frequently at Packer Ave Marine Terminal." Using a ship of this size would over inflate the benefits of this approach to addressing NOx emissions.

Role of Involved Agencies

In addition to the straightforward defects of the Corps' Compliance Documents, the various array of possible options presented – which lack the specificity required by regulation – fail to provide state and federal agencies with the level of detail or information they need to provide informed and accurate input. As a result, while the Army Corps has provided 30 days of comment upon this draft document to agencies at the federal and state level, they have not done so with the level of detail and specificity needed to fulfill the spirit or intent of the comment period included in the law.

Under 40 C.F.R. § 93.160, "Prior to determining that a federal action is in conformity, the federal agency making the conformity determination must obtain written commitments from the appropriate persons or agencies to implement any mitigation measures which are identified as conditions for making conformity determinations." The Army Corps has specifically stated that it does not have specific agreements or commitments from appropriate persons for the implementation of the various described mitigation measures – most of the options are specifically subject to future

discussions and negotiations. As a result, the Army Corps cannot, based upon this draft document, issue a final conformity determination.

Impact of Procedural Approach on Public Involvement

Section 93.154 requires, "any Federal department, agency, or instrumentality of the Federal government taking an action subject to this subpart must make its own conformity determination consistent with the requirements of this subpart. In making its conformity determination, a Federal agency must consider comments from any interested parties." The fragmented approach the Corps proposes for their conformity and mitigation plan represents a significant barrier to meaningful public input. The pigeon-holing of CAA compliance by each phase of construction significantly increases the burden on the public to monitor and respond to various and multiple public notices, and greatly reduces the likelihood of informed public comment on this issue.

Construction Schedules Do Not Trump Environmental Review

The Updated General Conformity Analysis and Mitigation Report states that, "The lead time necessary to implement many of the mitigation strategies is longer than the time available before the start of construction. For the first contract, it is anticipated that emission credits will be used as it is the only strategy that can meet the project schedule." (Section 8.) This statement highlights the flawed logic that dogs the MCD generally, and specifically the compliance plans. The construction schedule must be tailored to accommodate regulatory approvals, not vice versa. Such a bold statement represents an affront to the purpose and goals of the CAA conformity process.

Outstanding Issues

In addition to the Army Corps' failure to fulfill the necessary requirements of the law, there remain a number of significant outstanding questions that need to be addressed as well as providing state and federal regulatory agencies the level of detail they need to properly review and comment:

- ✓ The draft document specifically states that the Army Corps has changed its scope of work on this project to use "higher horsepower dredging" significantly increasing the associated level of air pollution. We question why the Army Corps would deliberately increase its air emissions knowing that it was already impacting air quality in the region with its proposed project. (See pg 2: "...the volume of work to be performed by a cutter suction dredge using two booster pumps increased by nearly 60%. This increased the emissions per volume of dredging because boosters are a significant source of emissions.") We question the accuracy of the assertion that "NOx emissions for the off-site strategies are simple because they are the same every year." We ask for discussion and justification of this assumption.

- ✓ The explanation for the use of reduction in project peak annual emissions to calculate cost effectiveness in annual NOx reductions was highly confusing. In order to assess the validity of this approach we ask for better clarification than was provided.

These outstanding issues must be addressed prior to moving forward with the project.

The Army Corps' Compliance Documents do not fulfill the requirements of the Clean Air Act or its implementing regulations. The contents of the Clean Air Act Draft Conditional Statement of Conformity, Delaware River Main Channel Deepening Project dated August 14, 2009 cannot replace a new Clean Air Act General Conformity Determination and Mitigation Plan for the Delaware River Main Channel Deepening Project.

Submitted,

Maya K. van Rossum
the Delaware Riverkeeper